SDG&E Comments on
CAISO's February 28, 2017
"2016-2017 Transmission Planning Process Stakeholder Meeting"

<u>The CAISO's 50% Out-of-State Renewable Portfolio Standard (RPS) Study Should Not Model the Unbuilt GateWay West Transmission Segments</u>

According to page 4 of the "*50% RPS Special Study – Out-of-State Portfolio Assessment, Results and Next Steps*" presentation, the out-of-state portfolio evaluation aims to "examine the transmission implications of meeting part of the 50 percent RPS obligation by relying on renewable resources outside of California." By including the currently unbuilt GateWay West transmission segments in the modeling, the CAISO is unable to address the threshold questions of (1) whether some, or all, of the unbuilt GateWay West transmission segments are critical to the development of wind resources in Wyoming, and (2) whether there are other transmission projects that would provide comparable access to new wind resources in Wyoming.

Instead, the CAISO's 50% out-of-state RPS study should evaluate the transmission implications of developing Wyoming wind assuming no major transmission upgrades are built. Once these implications are understood, it will be possible to determine whether there is a "need" for new transmission to access new wind resources in Wyoming, and subsequently, to assess how different transmission expansion options perform in meeting this need. Page 8 of the CAISO's presentation lists three different proposed Interregional Transmission Projects (ITPs) in the CAISO, Northern Tier Transmission Group (NTTG) and WestConnect planning regions. SDG&E notes that at least one of these projects, the TransWest Express transmission line, has acquired environmental permits and land rights comparable to the unbuilt GateWay West transmission segments.

Given the CAISO's competitive process for selecting projects that meet an identified need, it is important that all alternatives, including the unbuilt GateWay West transmission segments, be given the opportunity to compete for a place in the CAISO's 2017-2018 TPP. The CAISO should not assume as an input assumption that the unbuilt GateWay West transmission segments will get built.

<u>The Specific Locations and Quantities of Wyoming and New Mexico Wind Additions Should be Made Public</u>

According to page 7 of the CAISO's presentation, "NTTG and WestConnect provided resource location information for ~2,000 MW wind in WY and ~2,000 wind in NM". Using CAISO's currently published information, SDG&E is unable to determine the specific locations and quantities at which the CAISO modeled the Wyoming and New Mexico wind additions. This information is critical for assessing the reasonableness of the wind development assumptions, for identifying the scope of transmission upgrades required to connect such wind to the existing transmission network, and for determining exactly which existing transmission facilities are likely to be congested in different hours of the year if no major transmission upgrades were built. SDG&E recommends the RPS database the CAISO uses in its studies be available *entirely* in a commonly used format such as Excel.

A Full Evaluation of Out-of-State Renewable Portfolios Requires an Assessment of Non-CAISO Transmission Availability and Wheeling Costs

The GridView economic grid simulation model assumes transmission access within all balancing authorities is provided on a marginal economic basis; i.e., the ability of wind resources to access the transmission grid is subject only to the physical availability of transmission and the wind owners' willingness to accept the Locational Marginal Prices (LMPs) at the nodes where the wind resources connect to the grid. This modeling approach is consistent with how resources connecting within the CAISO balancing authority obtain transmission access. This modeling approach is not consistent with how resources connecting within non-CAISO balancing authorities obtain transmission access. [1]

Outside of the CAISO balancing authority, generating resources obtain transmission service via contract and the availability of such transmission service is dependent on the host utility's assessment of its own needs as well as on other transmission service commitments the host utility may have made. Anecdotal evidence suggests the ability to secure long-term firm contractual commitments for transmission service across non-CAISO balancing authorities is both limited and costly. SDG&E believes an important element of "examin[ing] the transmission implications of meeting part of the 50 percent RPS obligation," is a deep dive into the likely availability and cost of obtaining transmission service within non-CAISO balancing authorities.

Bulk Energy Storage Resource Special Study – Locational Benefits. The CAISO presented the results of analysis as to the locational benefits of additional pumped storage in the CAISO system. Two of the sites assessed would be electrically connected to the SDG&E transmission system, within the San Diego LCR area (San Vicente and Lake Elsinore). On page 5 of the presentation of the results of this analysis, the CAISO states, "Both Lake Elsinore and San Vicente storage projects would be interconnected at locations that would be effective in meeting the San Diego area local capacity needs." This is true; however, past analysis by the CAISO has indicated that generation in the San Diego load center is also effective at meeting or reducing local capacity needs in the Los Angeles load center. We recommend including this observation in the study results.

2021/2026 LCR Analysis for San Diego/Imperial Valley Area. The CAISO presented the results of the 2021/2026 LCR analysis for the greater San Diego/Imperial Valley area (see slide 34 of the presentation). SDG&E notes that the proposed REX transmission project would significantly reduce the LCR need in this area by effectively mitigating the limiting contingency (the N-1 of the Imperial Valley-North Gila 500 kV line). A sensitivity analysis of the LCR need with this project in place for the 2026 study year would provide useful information for determining the economic benefits of reduced LCR procurement costs.

[1] The Alberta Electric System Operator (AESO) balancing authority is the lone exception. AESO operates a nodal LMP market for transmission access similar to the CAISO's.